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| 09/964,086 | 09/26/2001 | William E. Richeson | TEK01 P-333 | 2451 |
| 277 | 7590 | 09/15/2004 | EXAMINER | |
| PRICE HENEVELD COOPER DEWITT & LITTON, LLP 695 KENMOOR, S.E. P O BOX 2567 GRAND RAPIDS, MI 49501 | | | ROJAS, BERNARD | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2832 | |

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,086

Applicant(s)

RICHESON, WILLIAM E.

Examiner

Bernard Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 23-31 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☒ Claim(s) 32-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 23-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/06/2003.

Applicant's election of Group I in the reply filed on 10/06/2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to what claimed elements [housing, core, bobbin and coil] the polymeric donor material is mixed therewith.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groove (US 3,753,182) in view of Soileau et al. (US 4,601,765).

Claims 32 and 33, Grove discloses electromagnet containing a powder metal housing, a coil [64] and a bobbin [70] for use in a brake.

Grove fails to teach the specific electromagnet structure.

Soileau et al. discloses an electromagnet with a powder metal core and housing [4, 5] containing a coil [2] with a bobbin [3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made use the electromagnet of Soileau et al. instead of Grove in order to improve the brakes performance by providing a compacted powdered iron magnetic core having high permeability and low losses.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the thickness of the rim of the housing, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claim 34, it would have been an obvious matter of design choice to use a polymeric material of polyethylenesultide, epoxy, and phenolic, since applicant has not disclosed that this material solves any stated problem or is for any particular purpose

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and it appears that the invention would perform equally well with polyurethane and a natural or synthetic rubber.

Claim 35, Grove shows the bobbin can be made of glass fibers [col. 3 lines 50-55].

Claim 36, Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core, the electromagnet having a magnetic cross section that is constant to within plus or minus three percent [figure 1].

Claim 37, it would have been an obvious matter of design choice to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 38, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 39, it would have been an obvious matter of design choice to use polyphenylene sulfide as a donor material, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it

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appears that the invention would perform equally well with the plastic donor material disclosed.

Claims 40 and 41, Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 42, it would have been an obvious matter of design choice to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 43, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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Claim 44, Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core.

Claim 45, Grove in view of Soileau et al. discloses the claimed invention with the exception of the elasticity of the moldable material. It would have been an obvious matter of design choice to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 46, Grove in view of Soileau et al. disclose the claimed invention with the exception of the powder metal core yield strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 47, Grove in view of Soileau et al. disclose the claimed invention with the exception of the elasticity of the powder metal core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

Claims 1-22 are allowed.

Response to Arguments

Applicant's arguments, filed 05/10/04, with respect to claims 1, 2 and 4-8 have been fully considered and are persuasive. The rejection of claims 1, 2 and 4-8 has been withdrawn.

Applicant's arguments filed 05/10/04 for claims 32-48 have been fully considered but they are not persuasive. The electromagnet of Soileau et al. is not solely intended for use in lamp ballast, Soileau et al. merely discloses that "The objects of the invention are to provide a compacted powdered iron magnetic core having high permeability and low losses comparable to those of conventional laminated ferrous sheet cores" and that "this would make the core practical for use in a discharge lamp ballast." Therefore, Soileau et al. does not preclude the use of the electromagnet with a powder metal core and housing in other environments.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Br


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9/15/04